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ABSTRACT

High school transcripts and standardized college entrance examination test score results from approximately 6 percent of California's 1990 public high school graduates (n=13,641) were evaluated by University of California (UC) and California State University (CSU) college admissions officers as if they were records submitted by actual freshman applicants. Eligibility for college admission was defined as passing a proscribed series of college preparatory courses and meeting a minimum grade point average and minimum college entrance examination score. (UC also allows eligibility by test scores alone.) Results showed that eligibility rates among California public high school graduates have improved, with CSU eligibility rates changing from 27.5 percent in 1986 to 34.6 percent in 1990 and UC eligibility rates increasing from 9.1 percent in 1986 to 12.4 percent in 1990. Over the same time period, grade point average improved for all ethnic groups except Latinos. A broader sector of the population is gravitating toward a college preparatory curriculum and meeting eligibility requirements. Assuming that eligibility rates remain constant, larger high school graduating classes by the year 2006 may generate close to 11,000 more UC eligible students. Enrollment projection models that carefully gauge each ethnic group's eligibility rate as well as their propensity to enroll are needed. Policy implications are discussed. (JDD)

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Is There a Place for Every Eligible Student in California Public Higher Education?

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ABSTRACT

Methodology and statistical results of a statewide evaluation of high school graduates' eligibility to attend a California public university are discussed. Study findings are viewed in the context of K-12 preparation, student affirmative action concerns, the State's Master Plan guidelines, and the consequences of alternate freshman admissions requirements. Although historically underrepresented ethnic groups continue to have below average eligibility rates, eligibility rates for all students have increased. Unfortunately, improved eligibility rates occur at a time when the State's public universities may need to raise eligibility requirements in order to meet Master Plan guidelines, and perhaps, curtail enrollments.

for Management Research, Policy Analysis, and Planning

This paper was presented at the Thirty-Fourth Annual Forum of the Association for Institutional Research held at The New Orleans Marriott, New Orleans, Louisiana, May 29, 1994 - June 1, 1994. This paper was reviewed by the AIR Forum Publications Committee and was judged to be of high quality and of interest to others concerned with the research of higher education. It has therefore been selected to be included in the ERIC Collection of Forum Papers.

Jean Endo
Editor
Forum Publications

Background: Eligibility and the California Master Plan for Higher Education

California's Master Plan for Higher Education outlines a three-tiered system of higher education. The University of California (UC) and California State University (CSU) systems offer bachelors and masters degrees. UC's unique mission includes doctoral education, certain professional fields, and the associated mission of research. One other segment, the California Community Colleges, offers only lower division education.

A key feature of the Master Plan is the set of guidelines for distributing enrollments of public high school graduates' among its institutions of higher education. Differential eligibility criteria is the mechanism for accomplishing this distribution. The University of California sets its freshman eligibility criteria to include the top one-eighth (12.5%) of the State's public high school graduates are eligible. Similarly, the California State University establishes admission requirements which include the top one-third (33.3%) of public high school graduates. The California Community Colleges are open to all high school graduates.

Future projections show diminished State resources at a time when demand for public higher education is rapidly expanding. Precise estimates of increased enrollment demand are difficult to derive -- the combined effects of future high school graduates' eligibility rates, demographic shifts, and the factors which influence students' postsecondary decisions are not easily quantified. Reliable estimates of students' eligibility constitute a key factor in projecting the State's ability to provide a place for every student in public higher education.

Actual eligibility rates of high school graduates are monitored by the California Postsecondary Education Commission (CPEC), in cooperation with high schools, the University of California and the California State University. Studies are periodically conducted to review conformance with Master Plan guidelines and document the academic preparation of public high school graduates. This paper focuses on the findings of the 1990 CPEC Eligibility Study (CPEC, 1992a), which is the official source of University eligibility information.

Methodology

High school transcripts from a representative sample (approximately 6%) of the State's 1990 public high school graduates were collected by CPEC and passed on for evaluation by both UC and CSU admissions officers who treated them as if they were records submitted by actual freshman applicants. Standardized test score results (SAT and ACT scores) for 1990 California seniors were provided by the testing agencies. Personal identifiers were used to match test score data to the sample of transcripts. A systematic random sample permitted results to be calculated by gender, major ethnic group and, additionally, by several geographic regions. The sampling methodology and computations of eligibility rates replicated the techniques used in the last two CPEC Eligibility Studies of 1983 and 1986. The sampling rate varied among schools on the basis of size and ethnic composition of the graduating class.

A random sample of transcripts were retrieved in accordance with instructions provided by CPEC. Compliance with random sampling procedures was met by 1,124 public high schools

which supplied a total of 13,641 student transcripts. The high school response rate was 91.3%, representing 95.1% of the 1990 public high school graduating class.

In order to compute reliable eligibility estimates for African-Americans and Latinos[1], a proportionally larger number of transcripts were requested of schools with large enrollments of African-American and Latino students. Data for each graduate record and high school in the sample were weighted to reflect actual proportions to the statewide population.

Defining Eligibility in the Context of Admissions Practices

A distinction between eligibility and admissibility is critical to an accurate interpretation of CPEC Eligibility Study findings. California's Master Plan mandates that UC and CSU to set minimum eligibility requirements to draw, respectively, from the top 12.5% and 33.3% of public high school graduates. Both institutions seek to admit all public high school graduates who meet minimum eligibility criteria. However, a student's eligibility does not ensure admissibility to a particular major and/or campus. For instance, some programs are more competitive than others at UC's eight general campuses.

Definitions of eligibility to UC and CSU vary with the changes in criteria implemented across years. At both UC and CSU, freshman eligibility may be achieved in a variety of ways -- in

[1] The Latino category includes Mexican-American/Chicano, Cuban, Puerto Rican, Central American, South American, and Other Spanish-American populations.

general, students must pass (with a grade of 'C' or better) a proscribed series of college preparatory courses, and they must meet a minimum grade point average (GPA) and SAT or ACT test score requirement. UC also allows eligibility by test scores alone.

Beginning with the 1983 CPEC Study, UC defined its eligible pool to include students who met all criteria upon graduation from high school (the fully eligible), as well as the category of students who successfully completed the college preparatory courses and met the minimum GPA requirements, but did not complete the required standardized tests (the potentially eligible). In other words, standardized test scores had no bearing on some students' eligibility status, and they were included, together with the fully eligible, in the defined UC eligible pool. Actual admissions practices have changed over the years as enrollment pressures have increased. For example, until the mid-1980's UC granted applicants the opportunity to become fully eligible by taking the standardized tests shortly after graduation from high school. However, given the increase in fully eligible students, and the fact that space is at a premium, UC now considers only those applicants who complete all of the eligibility requirements prior to high school graduation.

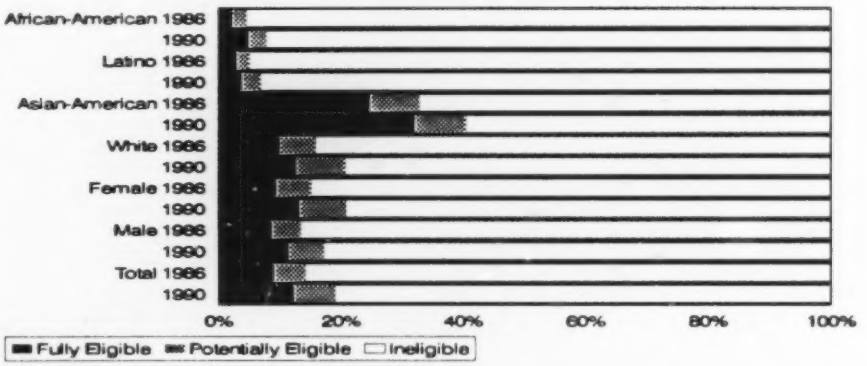
Major Study Findings

Through a combination of student efforts, school reform measures, and university outreach programs, eligibility rates among California public high school graduates have improved. California State University eligibility rates changed from 27.5% in 1986 to 34.6% in 1990.

The University of California eligibility rates for fully eligible students increased from 9.1% in 1986 to 12.4% in 1990.

Presented in Figure 1 are UC eligibility findings, by gender and ethnicity, for the last two Study years. From 1986 to 1990, proportional growth in the fully eligible graduating class surpassed that of the potentially eligible population -- the fully eligible pool increased by 36% while the potentially eligible pool increased by 30%.

FIGURE 1: Percentage of Public High School Graduates by Eligibility Status: 1986 and 1990



Although the percentage of public high school graduates who apply to UC has remained steady (approximately 13%) across the years, the percentage of public high school graduates who complete the college preparatory curriculum has increased rapidly. Over 31% of the 1990 public high school graduates completed all college preparatory courses required by UC, and this represents a 21% increase over the findings of the 1986 Study. As Table 1 shows,

higher course completion rates between 1986 and 1990 parallel increased participation in advanced placement examinations, and these results vary across ethnic groups. In addition, GPAs for public high school graduates have also improved for all ethnic groups, with the exception of Latinos (CPEC, 1992b).

TABLE 1:
College Preparatory Course Completion Rates, Advanced Placement Examination Participation Rate and High School Grade Point Averages
-- 1986 and 1990 Public High School Graduates --

	Completed College Preparatory Courses		Took Advanced Placement Exam(s)		High School Grade-Point Averages	
	1986	1990	1986	1990	1986	1990
African-American	18.5%	25.4%	1.9%	3.3%	2.29	2.33
Latino	16.2%	19.5%	2.8%	6.2%	2.44	2.44
Asian-American	41.8%	48.2%	13.1%	19.7%	2.96	3.11
White	27.7%	33.2%	6.4%	6.7%	2.65	2.74
Total	26.0%	31.4%	7.0%	10.0%	2.60	2.68

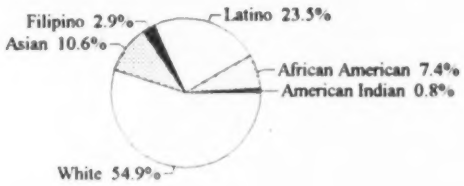
Source: California Postsecondary Education Commission. Good News About University Eligibility. Higher Education Update, Number 2, June 5, 1992.

Average total SAT scores for California seniors have remained fairly constant since 1985. However, there have been fluctuations in average total SAT scores for several ethnic groups. Since 1983, Asian-American, African American and white students' average total SAT scores steadily improved. Latino students' average SAT scores actually declined between 1985 and 1990 (CPEC, 1992a).

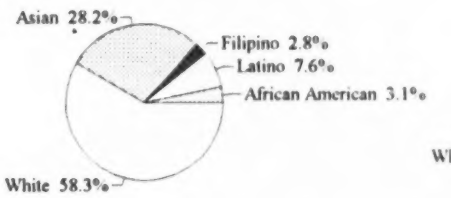
The ethnic composition of the entire 1990 public high school graduating class was substantially different from the ethnic makeup of its fully or potentially eligible sectors. Figure 2 illustrates that in comparison to others, white and Asian-American public high school graduates are more heavily represented in the fully and potentially UC-eligible sectors.

However, the improved eligibility rates between 1986 and 1990 (shown in Figure 1) are particularly encouraging for African Americans, whose eligibility rate rose from 2.3% to 5.0%. The improvement for Latinos was small (from 3.1% in 1986 to 3.9% in 1990). Increased eligibility rates are reflected in steady gains in the numbers of admitted University of California freshmen from these ethnic groups. From 1983 to 1993, the number of UC admitted African-American freshmen increased by 42.4% and the admit figures for Latino freshmen increased by 149.9%.

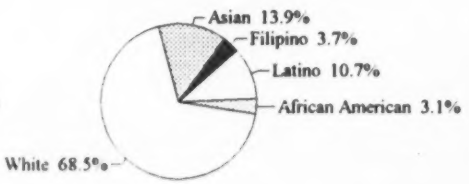
FIGURE 2 : Ethnic Composition of 1990 Public High School Graduates



1990 Public High School Graduates who were Fully UC Eligible



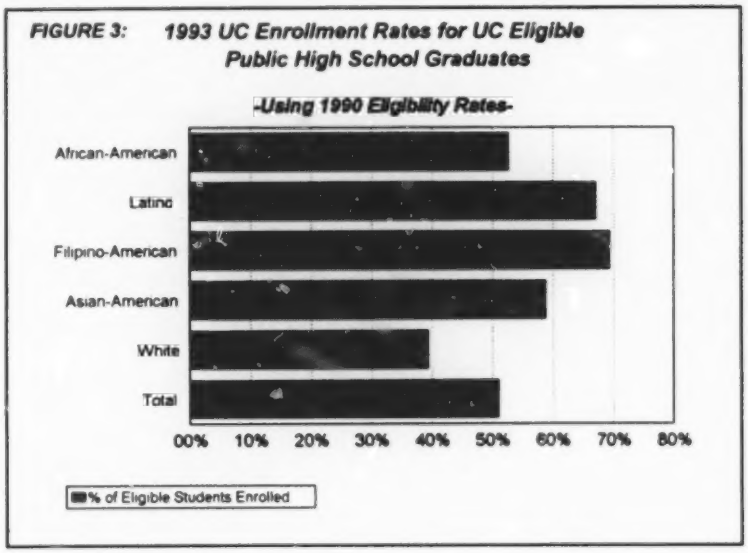
1990 Public High School Graduates who were Potentially UC Eligible



* Eligibility estimates for American Indians are unavailable due to insufficient sample size.

The University is quite successful in enrolling high proportions of eligible underrepresented (American Indian, African-American, Chicano, and Latino) high school graduates. Assuming

that Fall 1993 eligibility rates are equivalent to 1990 eligibility rates, Fall 1993 enrollments show that approximately 51.1% of all eligible public high school graduates enrolled at UC. Figure 3 depicts ethnic group variations in terms of enrollment rates of UC eligible public high school graduates.



Potentially Eligible and Ineligible Public High School Graduates

The potentially eligible pool has been and continues to be of great interest. Of primary concern is the effectiveness of high school and college advising programs. Past CPEC Eligibility Studies suggested that high school graduates needed to be informed of the importance of taking the standardized tests and completing the college preparatory curriculum. Programs which provide a variety of services to students in junior and senior high schools have been expanded in this area.

From 1986 to 1990, the potentially eligible pool of public high school graduates grew from 5.0% to 6.6%, representing a 32% increase. Increases occurred for all ethnic groups. The Latino increase represents a 53% gain (from 1.9% in 1986 to 2.9% in 1990). In comparison to earlier Study results, the 1990 Study indicates a broader sector of the population gravitating toward a college preparatory curriculum and meeting University eligibility requirements.

Trends in the academic profiles of ineligible students show increasing proportions of students who are close to becoming eligible -- they often lack only a few college preparatory courses. The 1986 and 1990 Study results reveal that the proportion of ineligible high school graduates with substantial requirement deficiencies decreased by close to 10%. Complementing this decline has been an increase in the proportion of students who are marginally ineligible because they lack a few required courses. (A profile of these students shows that they often did not successfully complete the three- year math subject requirements.)

This sector of the population, the marginally ineligible, is close to passing the border between ineligibility and eligibility. At the same time, greater numbers and proportions of students are gravitating out of the potentially eligible pool and into the fully eligible pool by the time they graduate high school.

Placement of Eligible High School Graduates

A fundamental aspect of UC's commitment to place all eligible public high school applicants

is diversity. In accordance with a Regents Policy adopted in May 1988, campuses select approximately one-half of their students entirely on the basis of test scores, course-work, and grades. The remainder of the class is selected from the full range of the eligible applicant group using factors that, in addition to their academic performance profile, contribute to the social and intellectual diversity of the University. Students compete for admission to specific campuses and majors. Eligible students who are not academically competitive enough to gain admission to their preferred campus or major, will be offered admission to another UC campus and/or major.

While current regular admissions requirements for California freshman applicants permit entry with grade-point averages as low as 2.82 (before Fall 1992 the minimum GPA required was 2.78), most applicants and enrolling students have considerably higher grades. The mean high school grade-point average of Fall 1993 enrolling freshmen is 3.77. Moreover, 29% of applicants, 35% of admitted students, and 34% of enrolling students have high school GPAs of 4.0 or greater.[2] Looking at Fall 1993 applicant, admitted, and enrolled populations, Figure 4 demonstrates that the chances of admission increase with higher grade-point averages. Consistent with Master Plan guidelines, students are admitted from throughout the range of permissible high school grade-point averages, provided other requirements are met.

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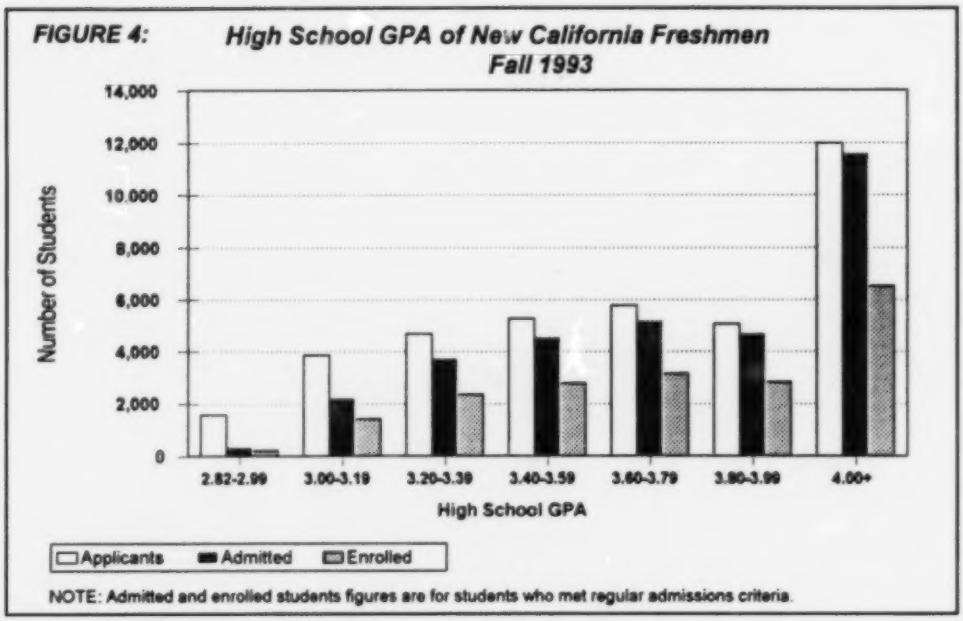
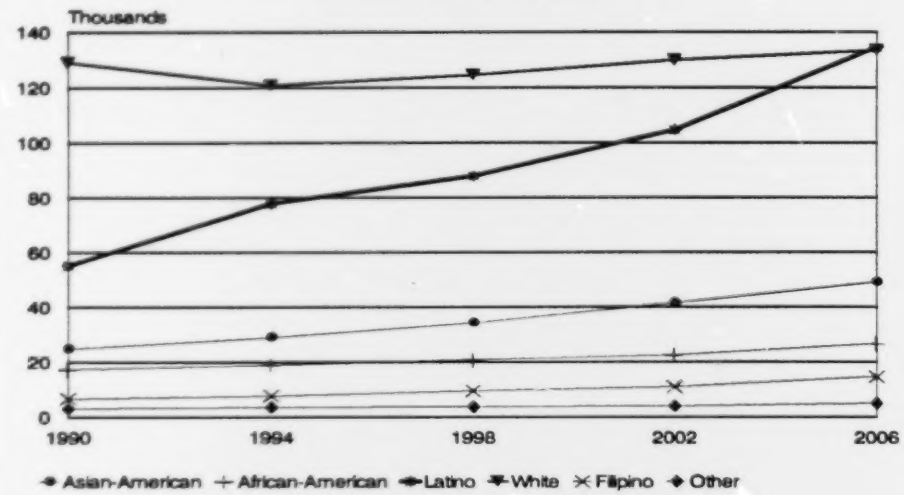
[2] Honors and advanced placement course grades are calculated with bonus points that allow a grade-point average to exceed 4.00.



Projected Growth in University Eligible Public High School Graduates

Demographic projections suggest that the numbers of high school graduates in the State will barely fluctuate across the next few years. However, by the year 2000, the projected number of graduates is expected to be 45 percent larger than in 1990, and by 2006, the increase may be 74%, representing approximately 175,000 additional graduates. As Figure 5 shows, by 2006, Latino graduates will constitute the majority ethnic group and the increase in Asian-American graduates will be considerable. Assuming that eligibility rates remain constant (a conservative assumption, considering the improvement shown from 1986 to 1990), the larger high school graduating class of the year 2006 may generate close to 11,000 more UC eligible students (CPEC, 1992c).

FIGURE 5: ***History and Projection of California Public High School Graduates - 1990 through 2006 -***



Source: State of California Department of Finance, Demographic Research Unit, October 1993.

Participation Rates

Over the years, the percentage of high school graduates choosing to enroll at UC has been inconsistent. The UC participation rate (proportion of high school graduates who enroll at UC the following fall term) has fluctuated from a low of 5.1% of high school graduates in 1976 to a high of 7.8% of graduates in 1986 (CPEC, 1987).

Predicted demographic changes make it essential that enrollment projection models carefully gauge each ethnic groups' eligibility rate as well as their propensity to enroll in an institution of higher education. Latino students (who will make up a substantial percentage of the larger high school graduating class in the next century) have traditionally become eligible, applied,

and enrolled at quite low levels. Although Asian-American high school graduates are fewer than Latino and white graduates, projections show that by the year 2006 as a result of their very high academic achievement, they will represent the largest pool of UC eligible students. In contrast, despite a rapidly growing Latino high school graduating class, their projected representation in the eligible pool lags (CPEC, 1992c).

What will be the enrollment patterns of the many new immigrants who will make up a sizable percentage of public high school graduates? Will the growth in the graduating senior class be concentrated among low-income families? If so, what effect is this likely to have on participation rates? These questions, and others, point to the new variables, which, together with eligibility information, should help model enrollment demand projections.

UC participation rates have varied by geographic region within California. To identify regional differences in high school graduates' preparation, the Study derived eligibility rates by geographic region. Regional eligibility rates closely parallel their rankings in two other areas: 1) the number of high school graduates they contribute to each year's UC freshman class, and 2) per capita income levels. Rural areas of Southern California, such as Riverside, San Bernardino, and San Joaquin Valley have below average eligibility rates. The San Francisco/Bay Area and Orange County have eligibility rates which rank high above the average.

A variety of personal, social, and economic factors simultaneously affect students'

A variety of personal, social, and economic factors simultaneously affect students' postsecondary enrollment choices. At times the number of qualified students who wish to enroll far exceeds capacity and at other times outreach offices must work very hard to generate a pool of well prepared applicants to fill available spaces. For instance, evidence suggests that students are choosing to enroll closer to home in order to reduce cost of attendance (Kowarsky & MacKenzie, 1993). In addition, underrepresented students continue to apply to fewer UC campuses than students of other ethnic groups, and to concentrate disproportionately on Berkeley and Los Angeles, the most competitive campuses. This makes their likelihood of admission smaller, other things being equal.

Policy Implications of the Study's Results

In response to the Study findings and their implications for long-term planning in California higher education, legislators, university officials, and numerous political factions are engaged in a complex discussion of eligibility and access to public higher education in California. Analysts and policy makers agree that the investigations and proceedings (or lack thereof) over the next few years will greatly determine the State's long-term social and economic health as a function of education afforded the population.

The most conservative estimates of increased enrollment demand assume that current eligibility and participation rates will remain constant. Unavoidably, enrollment limitations are discussed as a possible way to cope with reduced State funding. Thus, UC must consider

whether the 12.5% eligibility pool, as recommended in the Master Plan, should be narrowed to conform with the State's actual ability to fund the educational enterprise.

Ad hoc analyses of the Study findings have provided information about the effects of alternate eligibility criteria on different ethnic groups. Obviously, the way in which eligibility criteria changes are formulated determines which students are most affected and to what degree the enrolled student population is reduced in size. We must ask the simple question: is there a more desirable set of eligibility criteria which, in reducing the eligible pool from 12.5% of graduates to some lower rate, would not disproportionately diminish the size of the pool of underrepresented ethnic, regional, or economically disadvantaged groups?

The following is a brief summary of an analysis conducted using the 1990 CPEC Eligibility Study sample data (Kowarsky, 1992). The objective was to show how the honors bonus point policy contributed to students' eligibility status. Currently, an extra grade point is applied to a limited number of honors or advanced placement courses in the high school GPA calculation. One hypothesis might be that this policy least often benefits underrepresented ethnic minorities in comparison to the other ethnic groups. The analysis shows that all eligible students benefit from this policy. In fact, compared to other ethnic groups, a greater proportion of African-Americans and Latinos become ineligible without bonus points in their GPA calculation. Other manipulations of eligibility criteria are likely to produce similar results. Eligibility rates for underrepresented ethnic groups are hypersensitive; the lower the eligibility rate, the more reactive it is to changes in eligibility criteria.

The prospect of increased enrollment demand suggests that eligibility standards, which have traditionally been used to assure preparedness for college, may be reconfigured in order to curtail enrollments. The CPEC Eligibility Study database is testing ground for alternate eligibility criteria that may be used to define a smaller pool of eligible public high school graduates. The likely consequences of a reduced eligible pool are a smaller and less diverse enrolled student body.

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